



Application Number

IDS Flag Clearance for Application

**IDS
Information**

Content	Mailroom Date	Entry Number	IDS Review	Reviewer
M844	08-18-2003	14	<input checked="" type="checkbox"/>	02-23-2004 12:20:19 egillis
M844	08-08-2005	45	<input checked="" type="checkbox"/>	09-20-2005 07:39:04 asmith3

WEST Search History

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DATE: Sunday, January 22, 2006

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		<i>DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ</i>	
		l27 and (((dampen\$4 or damp\$3) or ((reduc\$4 or block\$4 or decreas\$4 or lower\$3 or minimiz\$4) with (noise or sound or acoustic\$4))) with ((viscoelastic or viscoelasti\$4) with (rubber\$4 or foam)))	1
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<input type="checkbox"/>	L28	L27 and L22	73
<input type="checkbox"/>	L27	L26 or L25 or L24	15536
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<input type="checkbox"/>	L19	L18 and (viscoelastic or viscoelasti\$4 or rubber\$4 or polyester or urethane or foam or polymer)	266
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<input type="checkbox"/>	L16	L15 and ((inner or outer or inside or outside or internal\$2 or external\$2 or surface or first or second or primary or secondary) with (gradient))	7522
<input type="checkbox"/>	L15	L14 and (inner or outer or inside or outside or internal\$2 or external\$2 or surface)	37306
<input type="checkbox"/>	L14	L13 and (gradient)	49002
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<input type="checkbox"/>	L10	L9 and (cylinder or tube or cylindrical\$2 or bore)	79
<input type="checkbox"/>	L9	L8 and (rubber or foam)	81
<input type="checkbox"/>	L8	L7 and (ceramic or glass or filament or carbon or fiber or fibrous or non-conduct\$4 or "non conduct\$4" or modulus)	88
<input type="checkbox"/>	L7	L6 and (inner or outer or inside or outside or internal\$2 or external\$2 or surface)	88
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<input type="checkbox"/>	L3	L2 and (gradient)	402
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<input type="checkbox"/>	L1	viscoelastic	19407

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Search Results - Record(s) 1 through 4 of 4 returned.

1. Document ID: US 20050134269 A1

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L68: Entry 1 of 4

File: PGPB

Jun 23, 2005

PGPUB-DOCUMENT-NUMBER: 20050134269
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050134269 A1

TITLE: GRADIENT COIL APPARATUS AND METHOD OF ASSEMBLY THEREOF

PUBLICATION-DATE: June 23, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Feenan, Peter John	Freeland		GB
Evans, Christopher John	Haddenham		GB
Langtry, Anthony	Oxford		GB
Cirel, Christopher Mark	Oxford		GB

US-CL-CURRENT: 324/318; 29/600

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KAC](#) [Drawings](#)

2. Document ID: US 20050040825 A1

L68: Entry 2 of 4

File: PGPB

Feb 24, 2005

PGPUB-DOCUMENT-NUMBER: 20050040825
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050040825 A1

TITLE: Acoustically damped gradient coil

PUBLICATION-DATE: February 24, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sellers, Michael Ben	Florence	SC	US
Duby, Tomas	Florence	SC	US
Clarke, Neil	Florence	SC	US
Mantone, Anthony	Florence	SC	US

US-CL-CURRENT: 324/318[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Drawings](#) 3. Document ID: US 6940281 B2

L68: Entry 3 of 4

File: USPT

Sep 6, 2005

US-PAT-NO: 6940281

DOCUMENT-IDENTIFIER: US 6940281 B2

TITLE: Gradient coil apparatus and method of assembly thereof

DATE-ISSUED: September 6, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Feenan; Peter John	Freeland			GB
Evans; Christopher John	Haddenham			GB
Langtry; Anthony	Oxford			GB
Cirel; Christopher Mark	Oxford			GB

US-CL-CURRENT: 324/318; 324/309[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Drawings](#) 4. Document ID: US 4954781 A

L68: Entry 4 of 4

File: USPT

Sep 4, 1990

US-PAT-NO: 4954781

DOCUMENT-IDENTIFIER: US 4954781 A

TITLE: Nuclear magnetic resonance imaging apparatus with reduced acoustic noise

DATE-ISSUED: September 4, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hirata; Haruhiko	Yokohama			JP

US-CL-CURRENT: 324/318; 324/300, 335/219[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Sequences](#) [Attachments](#) [Claims](#) [KMC](#) [Drawings](#)[Clear](#) [Generate Collection](#) [Print](#) [Fwd Refs](#) [Bkwd Refs](#) [Generate OACS](#)

(60 AND 27) .PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4
(L60 AND L27) .PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	4

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1. Document ID: US 20050040825 A1

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L71: Entry 1 of 1

File: PGPB

Feb 24, 2005

PGPUB-DOCUMENT-NUMBER: 20050040825

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050040825 A1

TITLE: Acoustically damped gradient coil

PUBLICATION-DATE: February 24, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sellers, Michael Ben	Florence	SC	US
Duby, Tomas	Florence	SC	US
Clarke, Neil	Florence	SC	US
Mantone, Anthony	Florence	SC	US

US-CL-CURRENT: 324/318

[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Sequences](#) | [Attachments](#) | [Claims](#) | [View](#) | [Drawings](#)

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Term	Documents
NOISE	878645
NOISES	79505
NOIZE	263
NOIZES	11
SOUND	557043
SOUNDS	93448
VISCOELASTIC	19351
VISCOELASTICS	158
FOAM	438898
FOAMS	78948

DAMPEN\$4	0
(L62 AND (((DAMPEN\$4 OR DAMP\$3) OR ((REDUC\$4 OR BLOCK\$4 OR DECREAS\$4 OR LOWER\$3 OR MINIMIZ\$4) WITH (NOISE OR SOUND OR ACOUSTIC\$4))) WITH ((VISCOELASTIC OR VISCOELASTI\$4) WITH (RUBBER\$4 OR FOAM)))).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	1

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1. Document ID: US 20050040825 A1

Using default format because multiple data bases are involved.

L72: Entry 1 of 5

File: PGPB

Feb 24, 2005

PGPUB-DOCUMENT-NUMBER: 20050040825

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050040825 A1

TITLE: Acoustically damped gradient coil

PUBLICATION-DATE: February 24, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sellers, Michael Ben	Florence	SC	US
Duby, Tomas	Florence	SC	US
Clarke, Neil	Florence	SC	US
Mantone, Anthony	Florence	SC	US

US-CL-CURRENT: 324/318

[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [References](#) [Sequences](#) [Attachments](#) [Claims](#) [KID](#) [Drawings](#)

2. Document ID: US 6212283 B1

L72: Entry 2 of 5

File: USPT

Apr 3, 2001

US-PAT-NO: 6212283

DOCUMENT-IDENTIFIER: US 6212283 B1

TITLE: Articulation assembly for intracanal hearing devices

DATE-ISSUED: April 3, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fletcher; Henry	Cameron Park	CA		
Urso; Richard C.	Redwood City	CA		
Sorensen; Jorgen	Tracy	CA		
Shennib; Adnan	Fremont	CA		

US-CL-CURRENT: 381/313; 381/324, 381/328, 381/329[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Claims](#) [KIN](#) [Draw](#) [TOC](#) 3. Document ID: US 5238215 A

L72: Entry 3 of 5

File: USPT

Aug 24, 1993

US-PAT-NO: 5238215

DOCUMENT-IDENTIFIER: US 5238215 A

TITLE: Vibration-damping mount

DATE-ISSUED: August 24, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Jeker; Rene	Hombrechtikon			CH
Reiser; Rudolf	Kusnacht			CH

US-CL-CURRENT: 248/638; 248/581, 248/631, 248/678[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Claims](#) [KIN](#) [Draw](#) [TOC](#) 4. Document ID: US 4942219 A

L72: Entry 4 of 5

File: USPT

Jul 17, 1990

US-PAT-NO: 4942219

DOCUMENT-IDENTIFIER: US 4942219 A

TITLE: Viscoelastic resin for vibration damping material and composition containing the same

DATE-ISSUED: July 17, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yatsuka; Takeshi	Osaka			JP
Yamazoe; Seiji	Osaka			JP
Hirakouchi; Hiroshi	Osaka			JP
Mizumura; Yutaka	Osaka			JP
Endo; Hiroshi	Sagamihara			JP
Kadowaki; Nobuo	Sagamihara			JP

US-CL-CURRENT: 528/272; 252/62, 428/458, 428/924, 525/438, 525/440, 525/454,
528/288, 528/296, 528/297, 528/299, 528/302, 528/308, 528/308.7[Full](#) [Title](#) [Citation](#) [Front](#) [Review](#) [Classification](#) [Date](#) [Reference](#) [Claims](#) [KIN](#) [Draw](#) [TOC](#)

5. Document ID: US 4859523 A

L72: Entry 5 of 5

File: USPT

Aug 22, 1989

US-PAT-NO: 4859523

DOCUMENT-IDENTIFIER: US 4859523 A

TITLE: Viscoelastic resin for vibration damping material

DATE-ISSUED: August 22, 1989

INVENTOR- INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Endoh; Hiroshi	Sagamihara			JP
Zama; Yoshimasa	Sagamihara			JP
Kadowaki; Nobuo	Sagamihara			JP
Yatuka; Takeshi	Ohtsu			JP
Nagai; Hiroshi	Ohtsu			JP
Mizumura; Yutaka	Ohtsu			JP

US-CL-CURRENT: 428/215; 428/425.8, 428/457, 428/480, 528/66

Full Title Citation Front Review Classification Date References Claims INIUC Drawn By

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Term	Documents
NOISE	878645
NOISES	79505
NOIZE	263
NOIZES	11
SOUND	557043
SOUNDS	93448
VISCOELASTIC	19351
VISCOELASTICS	158
FOAM	438898
FOAMS	78948
DAMPEN\$4	0
(L58 AND (((DAMPEN\$4 OR DAMP\$3) OR ((REDUC\$4 OR BLOCK\$4 OR DECREAS\$4 OR LOWER\$3 OR MINIMIZ\$4) WITH (NOISE OR SOUND OR ACOUSTIC\$4))) WITH ((VISCOELASTIC OR VISCOELASTI\$4) WITH (RUBBER\$4 OR FOAM)))).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	5

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L72: Entry 2 of 5

File: USPT

Apr 3, 2001

DOCUMENT-IDENTIFIER: US 6212283 B1

TITLE: Articulation assembly for intracanal hearing devices

Brief Summary Text (9):

The morphology of the ear canal reveals substantial deformation within the cartilaginous area 23 of the canal as a result of mandibular motion associated with talking, chewing, yawning, and biting. This deformation is generally caused by the asymmetric stresses from the actions of the mandibular condyle 33 on neighboring cartilaginous tissue. These deformations have radial components, e.g. constrictions, and axial components, i.e. inward and outward motion. These radial and axial deformations can generally be felt when one inserts a finger in the ear canal and moves the jaw. In one study, using magnetic resonance imaging (MRI), the deformation was shown to be as much as 25% in the anterior-posterior direction of the cartilaginous region of the canal (see, for example Oliveira, R. J., Hammer, B., Stillman, A., Holm, J., Jons, C., Margolis, R. H., A Look at Ear Canal Changes with Jaw Motion, Ear and Hearing, Vol. 13, No. 6, 1992, pp. 464-466.)

Detailed Description Text (19):

To further increase the mechano-acoustic isolation of the main module 40 from the receiver module 50, a vibration damper ring 46 is provided between the ball socket 62 and the main housing wall 41 as shown in FIG. 10. The vibration damper ring 46 is preferably made of a durable viscoelastic material such as certain types of rubber. A lubricant 49 coating the ball head 61 further provides mechano-acoustic isolation as well as minimizing friction between the ball head 61 and ball socket 62. The lubricant material may be petroleum-based such as Chevron SRI-2 or a fluorinated grease such as Krytox 240-AC.

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L72: Entry 3 of 5

File: USPT

Aug 24, 1993

DOCUMENT-IDENTIFIER: US 5238215 A
TITLE: Vibration-damping mount

Brief Summary Text (5):

With known stands for holding a superconducting magnet (located in a cryostat) of an NMR spectrometer, it is also not possible to replace an existing stand, which is holding a cryostat that is in use, with a different stand without removing the cryostat with the superconducting magnet, or at least changing its position. If the position of a superconducting magnet (located in a cryostat) of an NMR spectrometer is changed, a complex and laborious readjustment process is necessary, requiring several days.

Brief Summary Text (9):

As a result, the vibration-damping mount can be erected around an existing stand. When the vibration-damping mount according to the invention is erected in order to replace an existing stand, a unit that is being held can be left in place, and connections--for example, cables, cooling water lines, or liquid gas lines--to an operating unit can remain. No auxiliaries such as cranes or hoists are needed to hold the unit while the vibration-damping device is being erected. Pneumatic or piezoelectric damping elements are especially suitable as shock absorption elements. The identical structure of the segments results in uniform load distribution. The process of replacing an existing stand that is holding a superconducting magnet (located in a cryostat) of an NMR spectrometer is shortened by the use of the vibration-damping mount according to the invention from several days to a few hours. The complex, laborious readjustment of the superconducting magnets becomes unnecessary.

Brief Summary Text (12):

In a preferred embodiment of the invention, the plate-like parts of the damping device are arranged essentially vertically. As a result, the weight of the unit being held is transferred through the damping material by shear forces that cause shear stresses in the damping material. Vibration damping is influenced favorably, since a viscoelastic plastic foam that is preferably used as the damping material is particularly good at absorbing changes in shear stresses caused by vibrations.

Detailed Description Text (2):

The embodiment of the vibration-damping mount 1 according to the invention depicted in FIG. 1 holds a cryostat 2 of a superconducting magnet system of an NMR spectrometer. This vibration-damping mount 1 has a damping device 10, a supporting structure 20, shock absorption elements 30, and height adapters 40.

Detailed Description Text (3):

The damping device 10 shown in FIG. 2 consists of an inner hollow cylinder 11 (inner cylinder) and an outer hollow cylinder 13 (outer cylinder) concentric therewith, both of which can be made of aluminum, steel, or composite material. Since the damping device 10 is located in the leakage field of the superconducting magnet system of the NMR spectrometer, antimagnetic CrNi steel must be used if the hollow cylinder 13 is made of steel. A viscoelastic plastic foam acting as the damping material 12 is located between these two cylinders. The inner cylinder 11 of the damping device surrounds the cryostat 2.

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L72: Entry 4 of 5

File: USPT

Jul 17, 1990

DOCUMENT-IDENTIFIER: US 4942219 A

TITLE: Viscoelastic resin for vibration damping material and composition containing the same

Brief Summary Text (7):

Hitherto, as a viscoelastic composition which constitutes the middle layer of such a composite vibration damping material, there have been known a simple polyester (Japanese Patent Kokai No. 50-143880) or a polyester to which a plasticizer is added (Japanese Patent Kokai No. 51-93770); a simple polyurethane foam (Japanese Patent Kokai No. 51-91981); a simple polyamide (Japanese Patent Kokai No. 56-159160); a simple ethylene-polyvinyl acetate copolymer (Japanese Patent Kokai No. 57-34949); a composition of a polyvinyl butyral or a polyvinyl butyral and a polyvinyl acetate to which a plasticizer and a tackifier are added (Japanese Patent Kokoku No. 55-27975); a copolymer of a isocyanate prepolymer and a vinyl monomer (Japanese Patent Kokoku No. 52-26554); copolymers disclosed in Japanese Patent Kokoku Nos. 39-12451 and 45-34703 (see counterpart U.S. Pat. No. 3,640,833), and Japanese Patent Kokai No. 62-74645; and the like.

Detailed Description Text (4):

Dimethyl terephthalate (238 parts), dimethyl isophthalate (238 parts), trimellitic acid anhydride (9.6 parts), ethylene glycol (186 parts), neopentyl glycol (208 parts) and tetrabutyl titanate (0.17 part) were placed in a reactor equipped with a thermometer, a stirrer and a reflux condenser. Ester interchange reaction was carried out at 180 to 230.degree. C. for 8 hours and then the pressure of the reaction system was reduced to 5 mmHg over 30 minutes. During this time, the temperature rose to 250.degree. C. Then, polycondensation reaction was carried out under the pressure of 0.3 mmHg at 250.degree. C. for 30 minutes. The polyester thus obtained had the reduced viscosity of 0.61 dl/g. Then, nitrogen gas was introduced into this reaction system and .epsilon.-caprolactone (399 parts) was placed in the reactor. After the reaction system was thoroughly mixed, the system was heated at 220.degree. C. for 2 hours to obtain a copolyester. According to the analysis by NMR, differential scanning calorimeter and the like, the resulting polyester was an amorphous block copolyester having the reduced viscosity of 0.88 dl/g.

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L72: Entry 5 of 5

File: USPT

Aug 22, 1989

DOCUMENT-IDENTIFIER: US 4859523 A

TITLE: Viscoelastic resin for vibration damping material

Brief Summary Text (7):

Hitherto, as a viscoelastic composition which constitutes the middle layer of such a composite vibration damping material, there have been known a simple polyester (Japanese Patent Kokai No. 50-143880) or a polyester to which a plasticizer is added (Japanese Patent Kokai No. 51-93770): a simple polyurethane foam (Japanese Patent Kokai No. 51-91981): a simple polyamide (Japanese Patent Kokai No. 56-159160); a simple ethylene-polyvinyl acetate copolymer (Japanese Patent Kokai No. 57-34949): a composition of a polyvinyl butyral or a polyvinyl butyral and a polyvinyl acetate to which a plasticizer and a tackifier are added (Japanese Patent Kokoku No. 55-27975): a copolymer of a isocyanate prepolymer and a vinyl monomer (Japanese Patent Kokoku No. 52-26554): copolymers disclosed in Japanese Patent Kokoku Nos. 39-12451 and 45-34703: and the like.

Detailed Description Text (25):

Terephthalic acid (332 parts), isophthalic acid (498 parts), ethylene glycol (310 parts), neopentyl glycol (520 parts) and tetrabutoxy titanate (0.35 part) were placed in an autoclave equipped with a thermometer and a stirrer. Esterification reaction was carried out under a pressure of 3 to 4 kg/cm.sup.2 at 230.degree. to 240.degree. C. for 3 hours and then the pressure of the reaction system was reduced to 20 mmHg over 30 minutes. Then, polycondensation reaction was carried out under a pressure of 1 to 20 mmHg at 250.degree. C. for 50 minutes to obtain a polyester diol (a) as shown in the following Table 1. According to the analysis of the polyester diol (a), it had the hydroxyl number of 56 and the molecular weight of 2,000. The resin composition was determined by NMR analysis and the like and showed that 40 mol % of terephthalic acid, 60 mol % of isophthalic acid, 38 mol % of ethylene glycol, and 62 mol % of neopentyl glycol.

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L73: Entry 1 of 1

File: PGPB

Feb 24, 2005

PGPUB-DOCUMENT-NUMBER: 20050040825
 PGPUB-FILING-TYPE: new
 DOCUMENT-IDENTIFIER: US 20050040825 A1

TITLE: Acoustically damped gradient coil

PUBLICATION-DATE: February 24, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Sellers, Michael Ben	Florence	SC	US
Duby, Tomas	Florence	SC	US
Clarke, Neil	Florence	SC	US
Mantone, Anthony	Florence	SC	US

US-CL-CURRENT: 324/318

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L74: Entry 1 of 1

File: PGPB

Feb 24, 2005

PGPUB-DOCUMENT-NUMBER: 20050040825

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050040825 A1

TITLE: Acoustically damped gradient coil

PUBLICATION-DATE: February 24, 2005

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Mantone, Anthony	Florence	SC	US

US-CL-CURRENT: 324/318

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